People and animals have very similar endocannabinoid receptors in the nervous system and brain that control PAIN, MOOD, ANXIETY and APPETITE.

**THE CANNABINOID RECEPTORS**

The receptors in the Endocannabinoid system (ECS) we address: CB₁, CB₂ and TRPV₁.

These receptors are found on cell surfaces and impact various biological processes.

**CB₁**
- BRAIN
- LUNGS
- MUSCLES
- VASCULAR SYSTEM
- DIGESTIVE TRACT

**CB₂**
- LIVER
- PANCREAS
- BRAINSTEM

**TRPV₁**
- IMMUNE SYSTEM
- BONE MARROW
- LIVER
- PANCREAS
- BRAINSTEM

CBD binds to the TRPV₁ which can influence pain perception. Capsaicin is one of the main ingredients in PhytoMAXXX™. This activates the TRPV₁ receptor. Anandamide is a neurotransmitter in the brain aptly called the bliss molecule that binds to the TRPV₁. This is known to help with stress and seizures.

**WHAT IS CBD**

and how does it help the Endocannabinoid System?
CBD, THC AND LABEL CLAIMS | WHAT YOU NEED TO KNOW
Presented by Animal Nutritional Products, the Makers of PhytoMAXX™

THE PLANT
It is essential to note that the Industrial Hemp Plant differs significantly from the Marijuana Plant, as addressed in the 2018 Farm Bill. While both are varieties of the Cannabis Sativa Plant, Industrial Hemp Plant classified by law contains less than 0.3% of the psychoactive compound THC (tetrahydrocannabinol), whereas the Marijuana plant has 0.3% or more of naturally occurring THC. The compound CBD (Cannabidiol) is one of 80 identified cannabinoids found in Cannabis Sativa. Unlike THC, CBD is found as non-toxic. The laws governing each are different, with Marijuana remaining as a classified Schedule 1 controlled substance.

THE MARKET FOR HUMANS AND PETS
The CBD market is expected to exceed $500 million + during 2019. Estimated growth can achieve $22 billion by 2023 through new federal laws on CBD protection. Word of mouth has fueled this trend because of the positive effects pet parents have witnessed by using CBD to reduce pain, anxiety, inflammation and seizure related-issues in their pets. When pet parents do not receive CBD from a medical professional, they will seek it out on their own - a testament to the outstanding reputation of CBD. Currently, there are over a 1000 clinical studies on CBD, which is inspiring news for further breakthroughs in pain management and beyond, for both Humans and Pets alike.

HISTORY AND MECHANISM OF CBD RECEPTORS
A cannabinoid is a type of compound that interacts directly with an animal’s Endocannabinoid System (ECS). The ECS is a network of receptors, and it is this network which then interacts with cannabinoids to maintain vital functions throughout the body. Scientists first discovered the cannabinoid receptor in 1988, and by 1993 they had identified a second receptor. In 1995 the two receptors were classified as the CB1 and CB2. CB1 receptors are found abundantly in regions of the brain responsible for mental and physiological processes such as memory, cognition, emotion, and motor coordination. CB2 receptors are present throughout the central nervous and immune systems.

The interaction between the CB1 and CB2 receptors with cannabinoids, such as CBD and THC, may well be the catalyst for creating health-related benefits via relief from pain and anxiety, helping with appetite stimulation, mood management and more.

THE SCIENCE OF CBD AND THC
CBD and THC have an almost identical chemical makeup:
21 carbon atoms, 30 hydrogen atoms, and 2 oxygen atoms. What differentiates the two compounds is the arrangement of a single atom.

Now this is where those different positions of that atom come into play
CBD and THC have different molecular structures. They do not interact with the CB1 and CB2 receptors in the same manner, and it is this which profoundly differentiates the effects each has on the body. The biggest concern when comparing CBD to THC is the effects on the brain. The molecular structure of THC enables it to bind directly with the CB1 receptors in the brain. When this bond is formed the reaction creates signals that are sent to the brain. The result is a psychoactive effect, or getting high. Conversely, research demonstrates that CBD does not bind directly with the CB1 receptors, and its presence may even negate the bond between THC and the CB1 receptors - effectively neutralizing the psychoactive high induced by THC.

What you need to know when discussing and choosing a CBD product for the hospital and your clients

1. KNOW THE COMPANY
   Have they formulated or manufactured other supplements in the past?

2. LOOK AT THE LABEL
   Does the label have a proper Supplement Facts box that shows each ingredient with corresponding values?

3. WARNING SIGNALS
   Label claims on a CBD product should give you the first warning signal. The law does not permit label claims unless proven. Be cautious if a product calls itself, CBD. It is safer to go with a product that states, Hemp Extract instead of CBD.

4. PROPER LABELING AND DOSING
   Do you know how much to give a 60 lb dog or a 7 lb cat? Proper dosing guidelines to start with are essential. You can adjust up or down depending on the symptoms with some guidance from the manufacturer.

5. MANDATORY, THIRD PARTY ANALYSIS
   What are the label claims of the ingredients in the product? Make sure that you are shown an up to date Certificate of Analysis that pertains to that lot number. Over 80% of the products on the market do not contain what they state on the label.

If you have questions on PhytoMAXX™ and the latest info from the FDA pertaining to CBD and selling it in your Hospital, contact us
phone 1.800.224.6805 | email info@phytomaxx.com